The City of Lowell • Dept. of Planning and Development • Division of Development Services
Lowell City Hall • 375 Merrimack Street • Lowell, MA 01852
P: 978.674.4144 • F: 978.446.7103
www.LowellMA.gov

Diane N. Tradd
Assistant City Manager/Director

R. Eric Slagle
Director

Lowell Sustainability Council
Annual Lowell Sustainable Awards

The mission of the Lowell Sustainability Council (LSC), formerly the Green Building Commission (GBC), is to promote citywide sustainability. The LSC engages community stakeholders thorough education, communication, and collaboration to propose sustainable policies and encourage innovative solutions.

In 2007, the City of Lowell created the GBC to promote and advocate for "green" design, construction, and development practices through identification and implementation of policies and programs that increased environmental sustainability. In 2016, the GBC petitioned the City Council to officially be recognized as the Lowell Sustainability Council (LSC), a group that is not strictly focused on building and development but also works on broader goals focused on sustainability and environmental stewardship. The broader goals of the LSC is to make the City of Lowell a greener and more sustainable place to live and a community on the front end of environmental stewardship. The LSC intends to help the city achieve the goals laid out in its master plan, Sustainable Lowell 2025, and work with city staff and members of the public to educate the community about the importance of environmental sustainability and resilience.

The Sustainable Lowell Awards is an opportunity to nominate individuals within the City who are actively engaged in advancing the vision for a greener future described in the Sustainable Lowell 2025 Master Plan.

The intent of the Lowell Sustainable Award (s) are to recognize a local organization or individual who is actively contributing to the City of Lowell's sustainability objectives as identified in the Sustainable Lowell 2025 master plan. The Award (s) is also an opportunity to recognize projects that best demonstrate green building practices and foster greater interest and adoption of sustainable building practices community wide.

Award(s) Criteria

Owners or developers of new buildings or buildings that have undergone a major renovation are invited to nominate their project for a Sustainable Lowell Award. Any interested party may nominate a development project that successfully implements green building techniques into new construction or significant building rehabilitation. In addition, projects or individuals who support the principles of the LSC and the related sustainability elements of the City's Master plan may be nominated.

Criteria for the Sustainable Lowell Award (s) include:

- Contributes to the City's sustainability objectives with emphasis on reducing the city's carbon footprint
- Has renewable energy,
- Improves build efficiency

- Reduces environmental impact
- Improves green space, sourcing locally to make Lowell a sustainable city.

Previous Winners

Green Building Excellence Award (Residential): Logvin Home

The Logvin project is an excellent example of green building at the residential level and provides a model for residential buildings by incorporating both energy efficiency enhancements and on-site renewable energy sources. The building retrofit and implementation of renewable energy sources improved the energy rating of the home to be over **50% more efficient** than new construction built to code. A short list of improvements incorporated into the building retrofit includes:

- Building envelope efficiency improved by adding additional insulation to the basement ceiling, attic, rafters, and rim-joists and sealing any air leaks;
- Replaced appliances with new Energy Star appliances and used CFLs for all lights;
- Replaced existing hot water heating system with a solar thermal system with a tankless hot water heater for back-up;
- Installed a 3.2 KW solar PV system on the roof;
- Gas boiler replaced with an efficient gas system appropriately sized for the home's needs;
- Replaced four basement windows with double pane Energy Star rated windows; and
- Water conserving devices installed throughout the house.

Green Building Excellence Award (Commercial): Nobis

Nobis Engineering achieved LEED Gold certification for their building at 585 Middlesex Street, Lowell, MA. NOBIS has not only secured the first LEED rated building in the City, it has achieved its second to highest rating available from the LEED standard. It is particularly noteworthy that Nobis has adaptively reused a historic building in a historic district, successfully integrating a range of green building principles to the rehabilitation of their building. Their building is among the oldest in the country to achieve LEED certification.

- Site design that encourages alternative transportation, reduces stormwater impacts, and reduces the heat island effect.
- Improved water efficiency for interior operations and exterior landscaping
- Utilized a whole building approach to energy efficiency estimating 19% improved performance rating compared to a baseline building.
- 2.5% of energy used is generated by on-site renewable energy source
- Reduced, reuse, recycle: building re-use, diverted construction waste and recycled content for building materials used.
- Improved indoor air quality through outdoor and indoor air monitoring, using low emitting material, and day lighting and views

Green Building Excellence Award (Residential): Shapiro House

451 Pine Street is a 1,632SF south facing residential building built in 1983. The building is super insulated with R40 wall and R60 attic ratings. The home is wrapped with 6 mil continuous

polyethylene vapor barrier and exterior Tyvek wind barrier. The home's windows are triple galzed R 5 "Hurd Heat Mirror." The property's roof has 244.8SF of photovoltaic panels providing 2,970 watts. The property also has a Suntime Solar water heater, a 2 ton Trane heat pump and 200 cfm DesChamps air to air heat exchanger for building make up air.

Green Building Excellence Award (Commercial): Kennedy Place

Kennedy Place at 229 Stedman Street is a 15,000 square foot commercial building with perimeter insulation, south facing windows for solar gain, icynene insulation and Crane board for a wall R 30 rating and a roof rating of R35, 0.3 U factor rated windows, 95% efficient heating and cooling systems, EnergyStar appliances, fluorescent and LED lighting, light sensors and storm water management.

Green Building Excellence Award: CBA Unity Place Project

Unity Place is a new construction project containing 23 units of green, affordable rental housing owned by the Coalition for a Better Acre. The project is LEED for Homes Midrise Certifiable. The project also participated in the Massachusetts Multifamily New Construction Pilot Program for energy efficient projects which is largely based on the existing ENERGY STAR Homes program, with a focus on mid and high-rise residential buildings. The property also received funding from the Mass Clean Energy Center and the Department of Energy for the installation of a solar thermal system, which provides approximately 50% of the heating needs for domestic hot water. Among other green design features in Unity Place are an energy-efficient heating and cooling system and Energy Recovery Ventilator, which reclaims exhaust heat to help temper incoming air, reducing the energy load of the building. The solar hot water system consists of 14 roof-mounted panels that will offset the domestic hot water system by an anticipated 59%.

Green Building Excellence Award: Chris Gleba & Kris Erikson Residence, 48 Epping Street

48 Epping Street won the 2014 GBC Excellence Award for a Residential Structure. This project included a Deep Energy retrofit of a home built in 1895. This project was done using a significant number of LEED residential criteria including dealing with basement water intrusion, air infiltration and major improvements in insulation and exterior finishes. This is an example of what can be done with existing housing in the city.

The structure was wrapped with Tyvek Commercial Wrap. Tyvek was selected because it was both an air and water barrier and it had the high permeability that we desired for the "vapor-out" assembly. To achieve the DER program goal of R-60 at the roof, the designer chose to over-frame the existing roof framing with new 16" TJI framing and filled the cavities with rock wool insulation by overlapping (3) layers of materials. Both wall and ceiling assemblies virtually eliminated all thermal bridging concerns.

Exterior finishes were selected with the goals of low maintenance, high durability, and recycled content considerations. Included within these selections were concrete, galvalume steel, and fiberglass. Overall energy usage decreased by 54%, saving 6390kwh compared to the winter of 2011.

Green Building Excellence Award: Element Care, Inc.

This award was granted to Appleton Block Building and Element Care, Inc. at 166 Central Street for a commercial property that best demonstrates green building practices. The LSC is proud to recognize Element Care, Inc. for their commitment to improve the quality of life for our community through their use of Green principles and practices. The project team for the Element Care project includes:

Element Care, the property tenants; RCJ LLC, Arthur and Crystal Gonsalves, the building owners; Architectural Consulting Services, the project architects; and
Chapman Construction & Design, project contractors.

The Element Care construction project had an impressive 88% recycling rate for all construction and demolition debris. This equals 198.76 total tons of construction materials being recycled and diverted from our local landfills.

The project also included the use of low-VOC products, improved building and window insulation, a highly efficient, multi-zone VRF HVAC system with a rooftop economizer, Energy Star appliances, water-saving, dual flush toilets, a roof garden with rain water harvesting system and the installation of several materials made of post-consumer recycled content.

This project is a great example of a renovation project that created state of the art commercial space, while also including green and sustainable building practices.

Green Recognition Award: Mill City Grows

The LSC is proud to recognize a local organization for actively contributing to the City of Lowell's sustainability objectives as identified in the City's Master Plan. Since its formation Mill City Grows has changed the conversation about local food production and access in our community. Mill City Grows provides educational programming, run two urban farms, five community gardens, several school gardens; they have helped several local organizations build their own gardens.

They provide local residents the opportunity to grow produce and provide culturally appropriate vegetables for their families and have provided those of us in the community lacking a green thumb the opportunity to purchase fresh locally grown produce at their various mobile market and farmer's market locations.

Mill City Grows' work directly supports the city's goal of developing policies and programs that facilitate the production, distribution and consumption of locally grown food in the Greater Lowell region, as stated in our master plan, and we are grateful to have them as members of our local community.

Greed Design Award: University of Massachusetts Lowell (UML)

UMass Lowell received the Green Design Award for the completion of the Pulichino Tong Business Center. This LEED Gold certified building, their sixth LEED certified facility in the last four years, is a nearly 55,000 square foot educational facility featuring a forward-thinking, energy-efficient design. This project is part of the University's plan to achieve climate neutrality by 2050.

Lowell Sustainable Award: James S. Daley School Climate Change Club

The Daley School Climate Change Club, a group of 6th and 7th grade students who are dedicated to making a positive impact on the environment of their community, received the Community Leadership Award. These students established a pedal-powered electric generator for their school, and raised thousands of dollars to fund the future installation of solar panels at the Daley School for their classroom. These passionate students hope that in the future their

school can be entirely run by solar power; an ambitious goal toward building a more sustainable future for Lowell.

###